

REMARKS

I. Status of the Application

By the present Amendment, Applicant is amending claims 1, 3, 4, and 16. Further, Applicant is adding new claims 21-24 to recite features of the invention as disclosed in the specification. No new matter is added. Further, Applicant is canceling claims 2, 19, and 20 without prejudice or disclaimer.

Claims 1, 3-18, and 21-24 are all the claims currently pending in the application. Claims 1-20 have been rejected. The present Amendment addresses each point of rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

II. Claim Rejections Under 35 U.S.C. § 102(e)

Claims 1-20 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 7,058,252 to Woodgate et al. (hereinafter "Woodgate"). Applicant is amending claim 1 to recite the features of claims 2 and 19. Applicant is also rewriting claim 3 in independent form, and including the features of claim 19. Further, Applicant is amending claim 4 to include the features of claim 20. Applicant is canceling claims 2, 19, and 20 accordingly. Applicant respectfully traverses the rejection of claims 1 and 3-18.

Independent Claim 1

Woodgate is directed to a transfective display apparatus (col. 1, lines 19-20). Fig. 46 of Woodgate shows a side view of the transfective display. The transfective display includes a backlight 60 that illuminates the transfective pixel structure shown in Fig. 44. An array of birefringent lenses 138 is placed over the transfective pixel structure (col. 52, lines 65-67). Light from an external illuminant 468 is focused through the birefringent lenses 138 onto the transfective pixel structure (col. 52, line 67 - col. 53, line 3).

Fig. 44 of Woodgate shows that the transflective pixel structure includes horizontal rows of reflective and transmissive regions. For example, the first horizontal row includes transmissive regions 456, and the second horizontal row includes reflective regions 460 (col. 52, lines 44-46). The pixels are arranged as columns of red pixels 326, blue pixels 328, and green pixels 330 (col. 52, lines 41-44).

Claim 1 recites “a display panel disposed in front of said light source and having a plurality of pixel sections in the form of a matrix, each of said pixel sections including a first pixel for displaying an image for a first viewpoint and a second pixel for displaying an image for a second viewpoint, said second pixel being disposed at a position apart from said first pixel in a first direction” (emphasis added). Claim 1 also recites that “said transmissive regions in said pixel sections are arranged in a line in the first direction, and said reflective regions in said pixel sections are arranged in a line in the first direction, and each said line of said transmissive region and each said line of said reflective region alternates repeatedly in the second direction” (emphasis added). The sketch in Appendix I, which is based on Fig. 44 of Woodgate and is similar to the Examiner’s sketch on page 13 of the Office Action, shows that the first direction must run in the horizontal direction of Fig. 44, and the second direction must run in the vertical direction of Fig. 44 in order to meet the requirements of claim 1. The transmissive regions are labeled as “T”, and the reflective regions are labeled as “R”.

The sketch in Appendix II, which is based on Fig. 46 of Woodgate, shows that when the transflective pixel structure of Fig. 44 of Woodgate is positioned within the transflective display apparatus, the first direction is along the x axis, and the second direction is along the y axis. This is because the transflective pixel structure is arranged such that a pattern including a horizontal

pixel gap 333, a transmissive region 456, a reflective region 460, and another transmissive region 458, repeats from left to right along the y axis of Fig. 46.

Claim 1 further recites that “said optical unit is a lenticular lens in which a plurality of cylindrical lenses is arranged such that a geometric axis of each cylindrical lens is substantially aligned with a space between the first pixel and the second pixel of at least one pixel section, and the geometric axis of said cylindrical lens extends along said second direction” (emphasis added). As established above, the claimed second direction (and the geometric axis of the claimed cylindrical lens) corresponds to the y axis in the sketch in Appendix II. However, this sketch shows that the geometric axis of the cylindrical lenses 138 in Fig. 46 of Woodgate is along the x axis, and therefore is perpendicular to the second direction as recited in claim 1. Further, a person of ordinary skill in the art would not have been motivated to rotate the cylindrical lenses 138 by 90 degrees, because Woodgate states that the orientation of the cylindrical lenses 138 ensures that each eye sees the same image on the display with the same image brightness (col. 52, lines 56-58). Therefore, Applicant submits that claim 1 distinguishes over Woodgate at least by virtue of the aforementioned differences, as well as its additionally recited features. Further, claims 5, 7, 9-15, and 17 distinguish over Woodgate at least by virtue of their dependencies on claim 1, as well as their additionally recited features.

Independent Claims 3 and 4

Claim 3 recites “a display panel disposed in front of said light source and having a plurality of pixel sections in the form of a matrix, each of said pixel sections including a first pixel for displaying an image for a first viewpoint and a second pixel for displaying an image for a second viewpoint, said second pixel being disposed at a position apart from said first pixel in a first direction” (emphasis added). Claim 3 also recites that “said transmissive regions in said

pixel sections are arranged in a line in the first direction, and said reflective regions in said pixel sections are arranged in a line in the first direction, and each said line of said transmissive region and each said line of said reflective region alternates repeatedly in the second direction” (emphasis added). As discussed above, the sketch in Appendix I, which is based on Fig. 44 of Woodgate and is similar to the Examiner’s sketch on page 13, shows that the first direction must run in the horizontal direction, and the second direction must run in the vertical direction in order to meet the requirements of claim 3. The transmissive regions are labeled as “T”, and the reflective regions are labeled as “R”.

As also discussed above, the sketch in Appendix II, which is based on Fig. 46 of Woodgate, shows that when the transflective pixel structure of Fig. 44 of Woodgate is positioned within the transflective display apparatus, the first direction is along the x axis, and the second direction is along the y axis. The sketch in Appendix II shows that the transflective pixel structure is arranged such that a pattern including, from left to right, a horizontal pixel gap 333, a transmissive region 456, a reflective region 460, and another transmissive region 458, repeats along the y axis.

Claim 3 further recites that “said optical unit is a parallax barrier in which a plurality of slits is arranged such that a longitudinal direction of each slit is substantially aligned with a space between the first pixel and the second pixel of at least one pixel section, and the longitudinal direction of said slit extends along said second direction” (emphasis added). In rejecting claim 3, the Examiner asserts that the parallax barrier disclosed at col. 3, line 30 - col. 4, line 8 of Woodgate corresponds to the claimed parallax barrier (Office Action, page 4). Applicant respectfully disagrees.

Preliminarily Applicant notes that the pixels 68-75 shown in Fig. 5 of Woodgate include transmissive regions 78, but do not include reflective regions, as recited in claim 3. Further, even if the pixels 68-75 could be interpreted as having reflective regions similar to those illustrated in Figs. 44 and 46, the longitudinal direction of the slits 92 of the parallax barrier 82 would be along the x axis of Fig. 46, not the y axis, as required by claim 3. Applicant submits that claim 3 distinguishes over Woodgate at least by virtue of the aforementioned differences, as well as its additionally recited features.

Independent claim 4 recites features similar to those discussed above with regard to claim 3. Therefore, Applicant submits that claim 4 distinguishes over Woodgate at least for similar reasons. Further, claims 6, 8, and 18 distinguish over Woodgate at least by virtue of their dependencies on claim 4, as well as their additionally recited features.

With further regard to claim 4, the parallax barrier recited in claim 4 is interposed between the light source and the display panel. In contrast, as shown in Fig. 5 of Woodgate, the parallax barrier 84 of Woodgate is disposed after the backlight 60 and the LCD pixel plane 67 (col. 3, lines 32-52), not between the backlight 60 and the LCD pixel plane 67. Further, Woodgate teaches away from embodying the parallax barrier as slits behind the display, because such a display suffers from Fresnel diffraction artifacts, limiting the quality of the viewing windows that can be obtained (col. 5, lines 3-9). Applicant submits that claim 4 distinguishes over Woodgate for this additional reason.

Independent Claim 16

Claim 16 (as amended) recites:

A display panel comprising a plurality of pixels in the form
of a matrix, wherein:

each pixel includes a transmissive region for transmitting light and a reflective region for reflecting light,
each of said transmissive region and said reflective region is divided into a red sub-region, a green sub-region, and a blue sub-region,
said transmissive region alternates with said reflective region along a first array direction, and
said red sub-region, said green sub-region, and said blue sub-region alternate with each other along the first array direction.

Applicant respectfully submits that Woodgate fails to teach or suggest the display panel recited in claim 16. As shown in Fig. 44 of Woodgate, the pixel arrangement of the 2D transfective display system includes horizontal rows of reflective and transmissive regions. For example, the first horizontal row includes transmissive regions 456, and the second horizontal row includes reflective regions 460 (col. 52, lines 44-46). The pixels are arranged as columns of red pixels 326, blue pixels 328, and green pixels 330 (col. 52, lines 41-44).

However, Woodgate fails to teach or suggest that the transmissive region alternates with said reflective region along a first array direction, and the red, green, and blue sub-regions alternate with each other along the same first array direction, as recited in claim 16. Instead, the transmissive regions 456 alternate with the reflective regions 460 along the vertical direction (second direction in Appendix I), and the red pixels 326, blue pixels 328, and green pixels 330 alternate with each other along the horizontal direction (first direction in Appendix I). Applicant respectfully submits that claim 16 distinguishes over Woodgate at least by virtue of the aforementioned reasons, as well as its additionally recited features.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

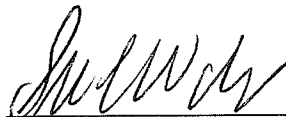
AMENDMENT UNDER 37 C.F.R. § 1.114(c)
Application No.: 10/786,480

Attorney Docket No.: Q80068

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: October 20, 2008

APPENDIX I

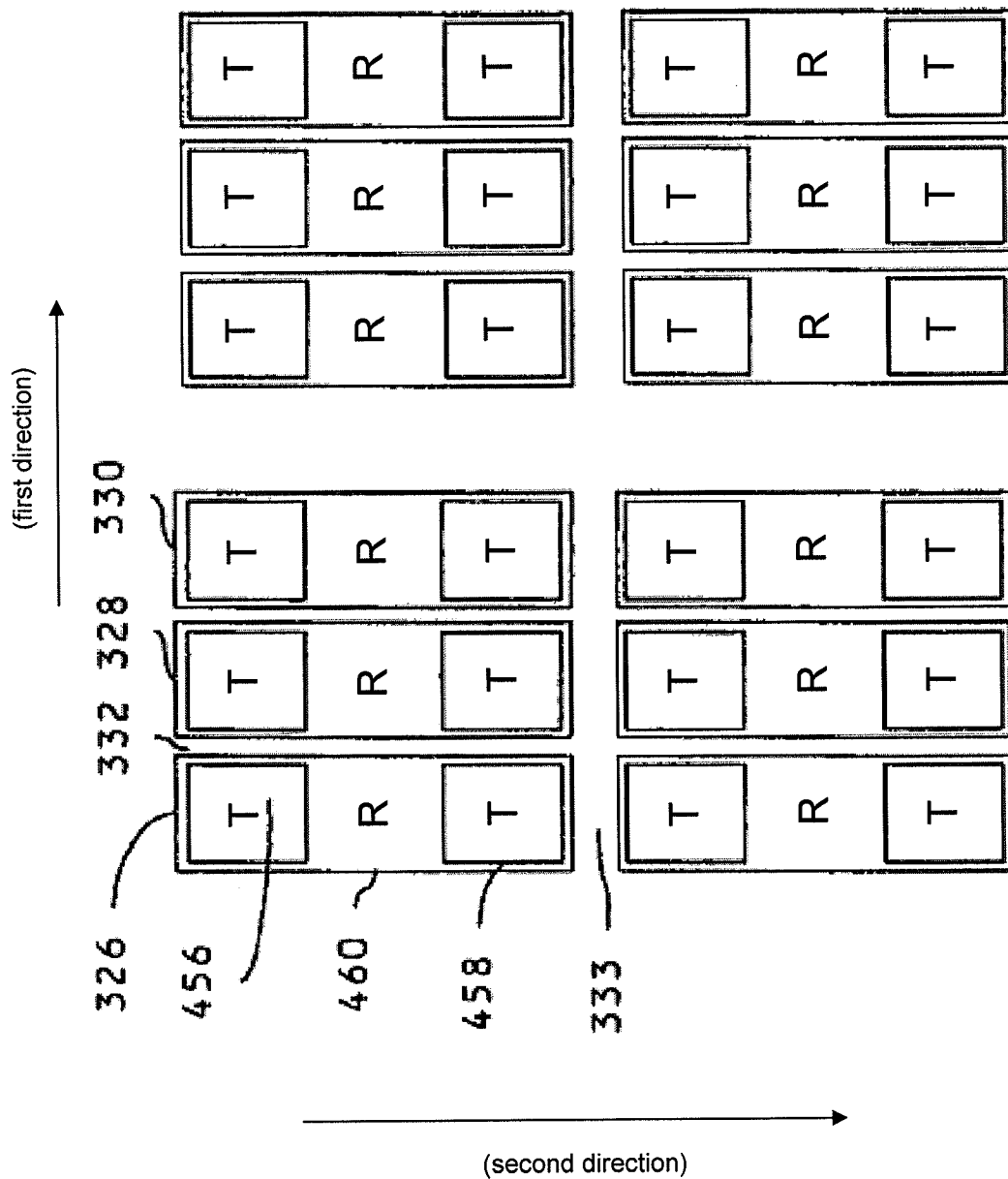


FIG. 44

APPENDIX II

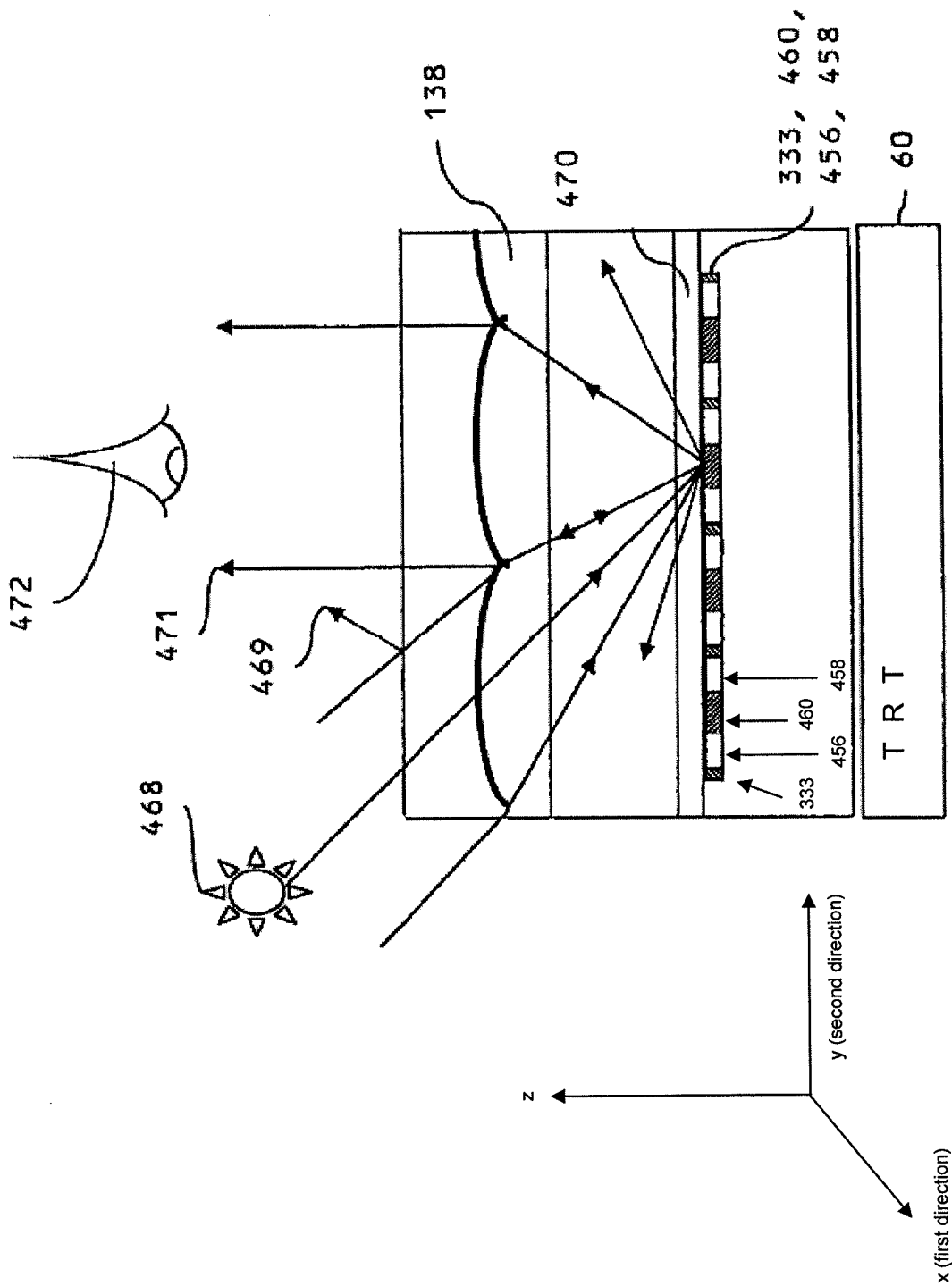


FIG. 46